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Conference Abstract

Outlook of Biodiversity Informatics in Benin: Main achievements

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Abstract

Benin became member of the Global Biodiversity Information Facility (GBIF) in 2004 and acceded to the status of voting member in 2011. GBIF Benin through the constant efforts of its node is now very active in GBIF community with respect to capacity building, data mobilization and data uses. GBIF Benin published more than 400 000 occurrence data from about 125 datasets on GBIF portal . As for capacity building, GBIF Benin yearly organizes at least 2 (two) workshops to enhance the capacities of national and regional partners in data mobilization and data uses. At regional level, GBIF Benin is leading a consortium of many countries (Senegal, Côte-d'Ivoire, Niger, Democratic Republic of Congo, Guinea, and Madagascar etc.) to help overcome the challenges of data mobilization and data uses at regional level. From the academic year 2017-2018, GBIF Benin, through its node manager, successfully cooperated with the University of Kansas to create a master program in biodiversity informatics. Biodiversity informatics is a field of investigation relatively new in science and is concerned with massive occurrence data collection on biodiversity as well as on environment; data treatments, analysis, and representations so as to derive sound research products to inform decisions on biodiversity conservation and sustainable uses in the context of climate and global changes. In Benin, the master program in biodiversity informatics is a permanent two-year program structured in teaching units with the following contents: 1) Basics concepts of biodiversity; 2) Biodiversity data capture; 3) Biodiversity inventories; 4) Biodiversity data analysis; 5) Climate change and biodiversity; 6) Ecological niche modeling and strategies for biodiversity conservation; 7) Data-science-policy interface; 8) Public Health and

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Applications of biodiversity data etc. At completion of their studies, students graduated in the program will be capacitated so as to achieve the following innovative objectives: 1) Use Geographic Information System to map spatial distribution of species; 2) Model the current and the future ecological niche of species in the context of climate and global changes; 3) Characterize biodiversity on scales ranging from local to global; 4) Assess geographic patterns among suites of species (i.e., communities); 5) Refine the knowledge on particular taxonomic groups; 6) Define priority zones of biodiversity conservation; 7) Develop strategies of species conservation; 8) Implement biodiversity conservation strategies; 9) Predict the risks of propagation of infectious diseases (Lassa fever, Ebola fever etc.) which vectors are living organisms, so as to support preventive actions, etc.

With such capacities, the graduated students of the master program are obviously the new generation of biodiversity information scientists who are able to address the needs of information so as to contribute to biodiversity conservation and its sustainable uses. Furthermore, in their respective countries and the rest of Africa, they will successfully contribute to the achievements of the Sustainable Development Goals as defined by the United Nations in 2015. With respect to data uses, more and more research products are piling up in Benin and are being integrated into decision makers' arena. In 2018, the results of our data uses were integrated in the elaboration of the second communication on climate change of Benin.

Keywords

biodiversity informatics, capacity building, data mobilization, data use, masters program in biodiversity informatics

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